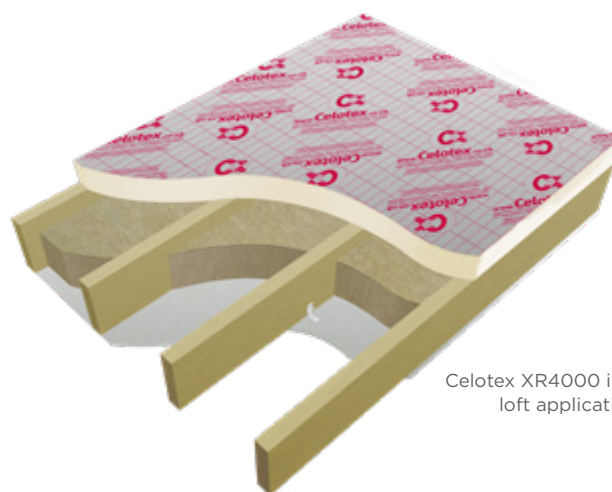


Use [Celotex GA4000](#) or [Celotex XR4000](#) high performance thermal insulation in loft insulation applications to minimise insulation thickness and give the following benefits:

- Provides energy efficient insulation measures without impacting on internal living space
- Insulating over joists provides a lightweight storage solution when insulation is fixed onto joists
- Minimal load added to the structure due to lightweight boards



Celotex XR4000 in a loft application

## Celotex GA4000 Technical Data

Thickness (mm)	R-value (m <sup>2</sup> K/W)	Maximum Board Weight (kg/m <sup>2</sup> )
GA4050	2.25	1.92
GA4060	2.70	2.26
GA4070	3.15	2.61
GA4075	3.40	2.78
GA4080	3.60	2.96
GA4090	4.05	3.31
GA4100	4.50	4.15

## Celotex XR4000 Technical Data

Thickness (mm)	R-value (m <sup>2</sup> K/W)	Maximum Board Weight (kg/m <sup>2</sup> )
XR4110	5.00	4.54
XR4120	5.45	4.93
XR4130	5.90	5.32
XR4140	6.35	5.71
XR4150	6.80	6.10
XR4165	7.50	6.69
XR4200	9.05	8.06

For product information for your project, please contact either our [technical team](#) or our [specification team](#).



We have an experienced team of energy assessors who can carry out SAP calculations, water calculations, airtightness testing and much more. [Contact us](#).



Celotex presents a comprehensive range of thermal bridging models featuring our PIR insulation products. This tool helps you identify the build-up required to reduce heat loss through a typical junction of elements or at openings. [Sign up now](#).

## Example U-value calculation: Loft Insulation

Construction		100 deep joists Thickness (mm)	150 deep joists Thickness (mm)
Outside surface resistance		-	-
Tiling including batten space		-	-
Loft space		-	-
Variable layer over joists		-	-
Mineral wool between joists @ 400 ctrs ( $\lambda = 0.040$ W/mK)		100	150
Polythene VCL		-	-
Plasterboard		12.5	12.5
Inside surface resistance		-	-
Variable Layer	Thickness (mm)	U-value (W/m <sup>2</sup> K)	U-value (W/m <sup>2</sup> K)
Celotex GA4000, over rafter	60	-	0.16
Celotex GA4000, over rafter	70	-	0.15
Celotex GA4000, over rafter	75	-	0.14
Celotex GA4000, over rafter	80	0.16	0.14
Celotex GA4000, over rafter	90	0.15	0.13
Celotex GA4000, over rafter	100	0.14	0.12
Celotex XR4000, over rafter	120	0.13	0.11
Celotex XR4000, over rafter	130	0.12	0.11

### U-value

For U-values see variable layer list, or for more options, refer to our online U-value calculator at [celotex.co.uk](http://celotex.co.uk)

## Installation Guidelines

Celotex insulation boards should not be installed when the temperature is at or below 4°C and falling.

### Insulation over the rafters

- Celotex can be used to top up insulation levels in a horizontal ceiling when mineral wool exists between the joists.
- Ensure the loft void is ventilated and eaves vents are left clear.
- Ensure ceilings are strong enough to withstand loadings associated with installation.
- To minimise air leakage and heat loss around the loft hatch, seal the edges with draught seals and mechanically fix Celotex TB4020 to the inside of the hatch.
- Ensure existing insulation between joists is in good condition, with no signs of sagging.
- Celotex is laid directly over the joists as a continuous layer.
- For maximum strength Celotex should be laid in the opposite direction to that of the ceiling joists. Ensure boards are laid across a minimum of two joists.
- Board joints are tightly butted together correctly supported by the joists.
- Celotex is then mechanically fixed to the joists with suitable fixings.

### For light storage only

- Lay 18mm of plywood over the Celotex and secure into the ceiling joists with suitable fixings.

Where building regulation approval is required, you should take advice from your local building control authority and the building designer.

### Typical U-values

U-values will vary depending on application. To calculate a specific U-value, please visit our online calculator at [celotex.co.uk](http://celotex.co.uk)

### Further information

If you wish to contact Celotex, please do so through the 'contact us' page on our website. For information regarding storage, installation and handling of Celotex products, or for health & safety information, please refer to our online 'literature' pages.

Celotex has a policy of continuous product development and reserves the right to alter product designs or specifications without prior notice.

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